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METHOD OF MAKING SOLUBLE BEVERAGE EXTRACT

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1

This invention relates to improvements in soluble beverage extracts and to an improved method of making the same.

A principal object of the invention is to provide an improved dry beverage product containing a beverage characterizing substance and a stabilizing substance, the latter of which, when the dry product is dissolved in a liquid, is thoroughly dispersed throughout the liquid and functions to keep the suspended particles in the liquid from coagulating and thereby provide a substantially permanent dispersion.

Another object of the invention is to provide a simplified method of introducing the said stabilizing substance into the product whereby it will be uniformly dispersed throughout the liquid body when the dry product is dissolved in water.

Another object of the invention is to provide a dry beverage product of the above character, including a soluble coffee extract as a beverage characterizing substance, and one or more of the following substances—skimmed milk, whole milk, cream, and vegetable oil, and to incorporate in such a product a stabilizer which functions not only as a mulsifier to keep the fatty and other particles uniformly dispersed throughout the beverage but also serves to hold the flavor and aroma principles of the beverage extract during the drying thereof.

A further object of the invention is to incorporate in a dry beverage powder of the above general class a mild sweetening substance, preferably lactose, which serves to accentuate the flavor of the coffee ingredient and also functions, when introduced as a powder into the dry beverage product, to make the beverage product free flowing, whereby the powdered product can be stored in mechanical dispensing machines with assurance that it will not adhere to the walls of the storage chamber and that a predetermined amount of the powder will be dispensed when the machine is actuated.

The coffee solubles are preferably extracted from the coffee by means of percolating water heated to approximately 200° F. through the freshly roasted and ground coffee. In this connection any approved method of percolating the water through the coffee grounds may be followed, for example, the counter-current method disclosed in United States Patent 2,282,138 in which the coffee grounds are subjected to repeated extractions, using the extract obtained by an earlier operation as the extracting vehicle in a subsequent extracting operation. Such extracts in addition to containing water soluble

2

coffee substances, also contain small amounts of fats which collect and hold the highly volatile flavoring principles of the coffee. In some instances the fat content of the extract is increased by the addition of vegetable oil or by mixing milk or cream into the coffee extract; the larger quantity of fats serving to retain a larger portion of flavoring principles and to impart to the beverage a rich coffee and cream flavor.

The coffee extract, either with or without the added fats, is concentrated and homogenized to break up and distribute the particles of fat throughout the extract before it is dried into powder form. However, when the powder is dissolved in water to form a liquid beverage, the small particles of fat, notwithstanding the homogenization of the extract before drying, have a tendency to coagulate and float to the top of the liquid beverage. This tendency, of course, is more noticeable when the fat content of the beverage has been increased by the addition of vegetable oil, milk or cream.

The present invention overcomes the above described tendency of the particles of fat and other substances to separate from the other ingredients, by introducing into the beverage product, before the drying thereof, an emulsifying agent which functions to hold the small particles of fat and other substances including coffee oil uniformly dispersed throughout the liquid beverage.

The emulsifying agent herein used is preferably lecithin, since it is a wholesome food product and a very small percentage by weight will be sufficient to coat the minute droplets of coffee oil and other fats contained in the beverage so that these substances will remain substantially permanently dispersed in the liquid beverage.

It is important that the lecithin be thoroughly distributed throughout the liquid beverage. Otherwise, it will not function efficiently to maintain the particles of fat in uniform dispersion for long periods of time. The present invention, therefore, includes an improved method for uniformly distributing the lecithin throughout beverage extract before the drying thereof and thereby insure uniform dispersion of the lecithin in the dry powdered product and in the liquid beverage made from the powder.

The lecithin will not mix with water. Consequently it will not mix readily with a thin coffee extract. In order, therefore, to obtain a uniform distribution of the lecithin throughout the beverage product, it is first thoroughly mixed with a quantity of soluble coffee powder. The soluble